IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Boubez et al.**	§	
	§	Group Art Unit: **3691**
Serial No. **09/758,112**	§	
	§	Examiner: **Hamilton, Lalita M.**
Filed: **January 3, 2001**	§	
	§	
For: **Apparatus and Method for Categorizing Services Using Canonical Service Descriptions**	§	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

36736
PATENT TRADEMARK OFFICE
CUSTOMER NUMBER

APPEAL BRIEF (37 C.F.R. 41.37)

This brief is in furtherance of the Notice of Appeal, filed in this case on March 20, 2006, together with a Pre-Appeal Brief Request for Review, and Reasons in Support of the Request. A Notice of Panel Decision in response to the Request, maintaining rejection of all pending claims of Appellants, was mailed from the USPTO on February 15, 2007.

A fee of $500.00 is required for filing an Appeal Brief. Please charge this fee to Yee & Associates, P.C. Deposit Account No. 50-3157. No additional fees are believed to be necessary. If, however, any additional fees are required, I authorize the Commissioner to charge these fees which may be required to Yee & Associates, P.C. Deposit Account No. 50-3157.

A one month extension of time is believed to be necessary. I authorize the Commissioner to charge the one month extension fee of $120.00 to Yee & Associates, P.C. Deposit Account No. 50-3157. No additional extension of time is believed to be necessary. If, however, an additional extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Yee & Associates, P.C. Deposit Account No. 50-3157.

REAL PARTY IN INTEREST

The real party in interest in this appeal is the following party: International Business Machines Corporation of Armonk, New York.

RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 1-31.

B. STATUS OF ALL THE CLAIMS IN APPLICATION

1. Claims canceled: None.
2. Claims withdrawn from consideration but not canceled: None.
3. Claims pending: 1-31.
4. Claims allowed: None.
5. Claims rejected: 1-31.

C. CLAIMS ON APPEAL

The Claims on appeal are: 1-31.

STATUS OF AMENDMENTS

An amendment after Final Rejection was not filed. Therefore, Claims 1-31 on appeal herein are as submitted in the Response to Office Action filed September 22, 2005.

SUMMARY OF CLAIMED SUBJECT MATTER

A. CLAIM 1 - INDEPENDENT

The subject matter of Claim 1 is directed to a method, in a data processing system, of registering services in a taxonomy. A data processing system in which the method may be implemented is shown in **Figure 3**, and is described in the application at page 8, line 17 – page 10, line 16. Important steps of the method of Claim 1 are shown in the flowchart of **Figure 8**, and described in the application at page 23, line 28-page 24, line 21, in connection with **Figure 8**. At page 23, lines 28-32, together with step **810** of **Figure 8**, the application teaches the receiving step of Claim 1. This step recites receiving a registration request at the data processing system, the registration request including a service description and an identification of a category within the taxonomy in which the service is to be registered. This step is also taught at page 19, lines 9-22 of the application. At page 24, lines 1-7, together with step **820** of **Figure 8**, the application teaches determining if the service description should be registered in the identified category based on a canonical service description associated with the category, as likewise recited by Claim 1. This determining step is also taught at page 19, lines 23-31 of the application. Claim 1 further recites registering the service description in the identified category using the data processing system, if the determination is that the service description should be registered in the identified category. This step is taught in the application at page 24, lines 7-12 of the application, together with steps **830** and **870** of **Figure 8**. Such step is also taught at page 20, lines 4-10 of the application.

B. CLAIM 11 – INDEPENDENT

The subject matter of Claim 11 is directed to a computer program product in a computer readable medium for registering services in taxonomy. The claim is a computer program product counterpart claim to method Claim 1.

C. CLAIM 21 – INDEPENDENT

The subject matter of Claim 21 is directed to an apparatus for registering services in a taxonomy. In accordance with Claim 21, and as shown by **Figure 4**, network **102** comprises

means for a broker **420** to receive a registration request from a service provider **430, 440** or **450**. As taught at page 19, lines 9-22 of the application, the registration request includes a service description and an identification of a category within the taxonomy in which the service is to be registered. Network **102** is also shown in **Figure 1**, and described in the application at page 6, lines 8-14. The application discloses at page 11, lines 21-27 that broker **420** can compromise a device **104** such as data processing system **200**, implemented as a server, which is shown by **Figure 2** and disclosed at page 7, line 13 – page 8, line 16. It is further disclosed, at page 19, line 32 – page 20, line 6, that broker **420** can determine whether the service description should be registered in the identified category. Accordingly, processor **202** or **204** of system **200**, shown in **Figure 2** and described at page 7, lines 16-18, can comprise the means recited by Claim 21 for determining if the service description should be registered in the identified category, based on a canonical service description associated with the category. Moreover, at page 20, lines 23-30, the application teaches that a service description is registered by storing it in memory. Thus, memory **209** of system **200**, as shown in **Figure 2** and described at page 7, lines 19-21, can be used as the means recited by Claim 21 for registering the service description in the identified category, if the determination is that the service description should be registered in the identified category.

D. CLAIM 31 – INDEPENDENT

The subject matter of Claim 31 is directed to a method in a service broker device within a computer network, of registering services in a taxonomy. At page 19, lines 9-22, together with **Figure 4**, the application teaches the receiving step of Claim 31, that is, receiving a registration request at the service broker device, the registration request including a canonical service description and identification of a category within the taxonomy in which the service is to be registered. This step is also shown by step **810** of **Figure 8**, and described in the application at page 23, lines 28-32. The application at page 19, lines 23-31 teaches the determining step of the application, that is, determining if the service description should be registered in the identified category based on a canonical service description associated with the category, wherein the canonical service description includes information identifying minimum requirements of the category regarding one or more of security requirements, privacy requirements, or communication protocol requirements. This step is also shown by steps **820-840** of **Figure 8**,

and described in the application at page 24, lines 1-16. The application at page 20, lines 4-10 teaches the Claim 31 recitation that if the determination is that the service description should be registered in the identified category, the service description is registered in the identified category. The application at page 20, lines 11-20 teaches the Claim 31 recitation that if the determination is that the service description should not be registered in the identified category, the taxonomy is searched for an alternate category in which the service description should be registered, and the service description is registered in the alternate category. The application at page 20, lines 23-30 teaches the Claim 31 recitation of storing the service description and an associated model description in a storage device in association with the registered category. A storage device for this claim element is taught to be the memory **209** of data processing system **200**, as shown by **Figure 2** and described at page 7, lines 17-21 of the application.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. GROUND OF REJECTION (Claims 1-31)

Claims 1-31 stand rejected under 35 U.S.C. § 102(e) as anticipated by Patent Publication US 2002/0062265 (*Poon*).

ARGUMENT

A. GROUND OF REJECTION (Claims 1-31)

The Final Office Action rejects Claims 1-31 under 35 U.S.C. § 102(e), as being anticipated by Patent Publication US 2002/0062265 (*Poon*). This is the sole ground for rejecting Appellants' claims that is set forth in the Final Office Action.

A.1. Teachings of Appellants' Invention

Appellants' invention is generally directed to a method and apparatus for categorizing services using a canonical service description. The application teaches that a canonical service description designates minimum requirements for a service classified into a particular classification, and ensures that all services classified into the particular classification will "have a minimum level of functionality." By using a canonical description, it can be determined whether a service, which is sought to be classified into a particular classification or taxonomy, does in fact meet pre-specified requirements for that classification. An e-business service consumer is thereby provided with assistance in locating and contacting a reliable provider of a desired e-business service. The pre-specified requirements could, for example, pertain to functionality and application program interface.

These teachings of Appellants are set forth in the application, such as at page 3, lines 5-17:

> The present invention provides an apparatus and method for service classification. The present invention makes use of canonical service descriptions which designate minimum requirements for a service to be classified into a corresponding classification. Based on the canonical service description, it can be determined whether a service that wishes to be classified into a particular classification of a taxonomy on a service broker meets the minimum requirements, in terms of functionality and application program interface (API), for example, for that classification. Furthermore, the use of canonical service descriptions ensures that all services classified into a particular classification have a minimum level of functionality that will allow them to function properly when invoked.

Claim 1 recites a method for achieving the objectives of Appellants, as follows:

> 1. A method, in a data processing system, of registering services in a taxonomy, comprising:
>
> receiving a registration request at the data processing system, the registration request including a service description and an identification of a category within the taxonomy in which the service is to be registered;

determining if the service description should be registered in the identified category based on a canonical service description associated with the category;

registering the service description in the identified category using the data processing system if the determination is that the service description should be registered in the identified category.

A.2. Rejection of Claim 1

In rejecting Appellants' Claims 1-31 under 35 U.S.C. § 102, the Examiner cited the *Poon* reference in the Final Office Action, at pages 49-50 and paragraphs [0026] – [0032]. Paragraph [0029] was apparently the only section cited in rejecting respective features of Claim 1. Paragraphs [0006] and [0029] of *Poon* are as follows:

> [0006] A method and apparatus are disclosed for facilitating category selection by a user in a computerized auction. A category field is provided, containing a plurality of category entries used to categorize an item in the auction. One category entry is selected in the category field and at least one subcategory field is provided, containing a plurality of subcategory entries also used to categorize the item in the auction, the subcategory entries corresponding to the one selected category entry of the plurality of category entries. At least one subcategory entry corresponding to the one selected category entry is further selected in the at least one subcategory field for further processing.
>
> [0029] If the category number or numeric I.D. is not available, then, at step **430**, the user selects a category from a list of available categories displayed in an interactive category area. Next, the client browser **336** performs a test whether the selected category has related subcategories at step **440**. If the selected category has no related subcategories, then the user has the option to record the category number of the selected category at step **445** and may proceed further with the item registration process. Alternatively, if related subcategories exist, the user selects a subcategory from a list of available subcategories related to the selected category at step **450**. The list of available subcategories is displayed in an interactive area adjacent to the category area. A test whether the subcategory has no further related subcategories is performed by the client browser at step **460**. If no further related subcategories exist, then the user may record the category number of the selected combination of category and subcategory at step **470** and proceed further with the item registration process. Otherwise, if further subcategories related to the selected subcategory are still available, the user goes back to step **450** and repeats the subcategory selection process. The embodiment described above allows the client browser **336** to perform the category selection process using category data and Javascript code supplied by the server application **312**. Alternatively, the server application **312** may interact with the user during the selection process and may perform other functions as described in further detail below.

Poon, as taught for example in the summary at page 1, paragraph [0006], provides an arrangement for facilitating user selection of item categories in a computerized auction. Item categories and subcategories may be made accessible to a user over the Internet or the like.

Initially, the user receives a list of available categories and selects one of them, as disclosed in paragraph (0029), page 50. The user may then be presented with a list of available subcategories related to the selected category. The user at his option can select one of the subcategories, in order to categorize the item in the auction.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, as they are in the claims. *In re Bond,* 910 F .2d 831,832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry,* 32 F.3d 1579, 1582, 21 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. Kalman v. Kimberly-Clark Corp., 713 F .2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983). Moreover, in accordance with **MPEP § 2141.02**, each prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 220 U.S.P.Q. 303 (Fed. Cir. 1983).

Appellants respectfully submit that *Poon* does not teach every element of the claimed invention arranged as they are in Claim 1. Specifically, *Poon* fails to teach any of the following Claim 1 features:

> (1) Receiving a registration request at the data processing system, the registration request including a service description and an identification of a category within the taxonomy in which the service is to be registered; (referred to hereinafter as "Feature (1)")
>
> (2) Determining if the service description should be registered in the identified category based on a canonical service description associated with the category; (referred to hereinafter as "Feature (2)") and
>
> (3) Registering the service description in the identified category using the data processing system if the determination is that the service description should be registered in the identified category. (referred to hereinafter as "Feature (3)")

A.3. Feature (1) of Claim 1 Distinguishes over Cited Reference

Feature (1) of Claim 1 recites receiving a registration request that includes both a service description and an identification of a category, within the taxonomy in which the service is to be registered. Thus, the registration request of Claim 1 includes two distinct and different request

elements or components. However, in the Final Office Action, the Examiner cited only paragraph [0029] of *Poon*, at page 50, to show such Feature (1) of Claim 1. This paragraph teaches that a user selects a category from a list of available categories received from a server. The server then responds with a list of subcategories for the user selected category, if there are any such subcategories available. This process continues until there are no further subcategories. The user may then decide to use the final selected category or subcategory for item registration.

The cited paragraph of *Poon* clearly does not teach or refer to any activity that could reasonably be characterized as "receiving a registration request". Moreover, *Poon* fails to teach or suggest a registration request that includes both elements of Feature (1) of Claim 1. As emphasized above, the registration request of Feature (1) requires both a service description and an identification of a category for registering the service. *Poon*, of course, is concerned with auction items, not service descriptions, and thus provides no teaching in regard to either service descriptions or identification of categories therefor. However, even if it is assumed that an auction item of *Poon* is equivalent to a service description of Claim 1, *Poon* still fails to teach a registration request that is received, and that includes both an auction item and an identification of a category for registering the item, as taught by Feature (1) of Claim 1.

Moreover, the above teaching of Feature (1) would be contrary to the clear disclosure of paragraph [0029] of *Poon*. Appellants' Feature (1) teaches that a user seeking to register a service description must provide both the description and an identification of a category. However, the cited paragraph [0029] emphasizes that it is the server, and not the user, that proposes or identifies categories and subcategories for registering the item.

A.4. Features (2) and (3) of Claim 1 Distinguish over the Cited Art

Paragraph [0029] was also the only section of *Poon* cited against Feature (2) of Appellants' Claim 1. It is readily apparent, however, that paragraph [0029] fails to disclose the recitation of Feature (2), that is, determining if the service description should be registered in the identified category, based on a canonical service description associated with the category. As taught by the application, the canonical service description of Feature (2) is absolutely essential for achieving Appellants' purpose of ensuring "that all services classified into a particular classification have a minimum level of functionality that will allow them to function properly when envoked." In contrast, paragraph [0029] of *Poon* merely teaches the use of a client

browser, in order to determine if there are related subcategories associated with a category selected by the user. In fact, nowhere in *Poon* is there any teaching of a canonical service description associated with a category, nor is there any disclosure of a comparable component. Thus, *Poon* is contrary to essential teachings of Appellants, which stress the importance of a canonical service description for providing a minimal level of assurance in regard to services classified thereby. Unlike Appellants, *Poon* is not concerned with ensuring a minimal level of classified services, as is achieved by use of the canonical service description of Claim 1. *Poon* has objectives that are unrelated to this concern. Accordingly, *Poon* would have no need for or interest in the canonical service description or related elements of Feature (2).

Moreover, the Final Office Action has proffered no analysis or explanation as to why the cited paragraph [0029] of *Poon* somehow anticipates determining whether the service description should be registered in the identified category, based on a canonical service description associated with the category, as required by Feature (2) of Claim 1.

Feature (3) of Claim 1 recites registering the service description in the identified category, if the determination is that the service description should be registered in the identified category. As discussed above, *Poon* does not disclose the "determination" of Feature (3), that is, a determination that was based on the canonical service description associated with the identified category. In *Poon*, the arrangement thereof only determines if there are further subcategories for selection. The user then decides what category the item should be listed in. Accordingly, *Poon* fails to disclose Feature (3) of Appellants' Claim 1.

From the above, it is readily apparent that *Poon* does not teach each and every feature of independent Claim 1, as is required under 35 U.S.C. § 102.

A.5. Claims 11, 21 and 31 Distinguish Over the Cited Art

Independent Claims 11, 21, and 31 are respectively directed to subject matter similar to the subject matter of Claim 1, and are each considered to patentably distinguish over the art for at least the same reasons given in support thereof.

A.6. Claims 2, 12 and 22 Distinguish Over the Cited Art

Claims 2, 12, and 22 depend from Claims 1, 11, and 21, respectively, and are each considered to patentably distinguish over the art for the same reasons given in support thereof.

Additionally, Claims 2, 12, and 22 distinguish over the art in reciting that the canonical service description identifies minimum criteria for the category. The *Poon* reference does not teach or suggest this feature. In fact, the only test applied by *Poon* is whether the user selected category has related subcategories. There is no test applied by *Poon* that determines whether a service description should be registered with an identified category based on a canonical service description associated with the category, particularly where the canonical service identifies minimum criteria for the selected category.

A.7. Claims 3, 13 and 23 Distinguish Over the Cited Art

Claims 3, 13, 23 depend from Claims 1, 11, and 21, respectively, and are each considered to patentably distinguish over the art for the same reasons given in support thereof. Additionally, Claims 3, 13, 23 distinguish over the art in reciting that registering the service description in the category includes storing the service description and an associated model description in a storage in association with the category. The *Poon* reference fails to teach or suggest this feature.

A.8. Claims 5, 15, and 25 Distinguish Over the Cited Art

Claims 5, 15, and 25 depend from Claims 1, 11, and 21, respectively, and are each considered to patentably distinguish over the art for the same reasons given in support thereof. Additionally, Claims 5, 15, and 25 distinguish over the art in reciting that if it is determined that the service description should not be registered in the category, a determination is made as to whether a request to add a new category is received. The *Poon* reference neither teaches nor suggests this feature. In fact, *Poon* actually teaches away from this claimed feature, since the categories and subcategories of *Poon* constrain the input of the user, rather than receiving a request to add a new category.

A.9. Claims 7, 17, and 27 Distinguish Over the Cited Art

Claims 7, 17, and 27 depend from Claims 1, 11, and 21, respectively, and are each considered to patentably distinguish over the art for the same reasons given in support thereof. Additionally, Claims 7, 17, and 27 distinguish over the art in reciting that the canonical service description includes information identifying minimum requirements of the category regarding one or more of security requirements, privacy requirements, and communication protocol

requirements. The *Poon* reference does not teach or suggest this feature. In fact, *Poon* does not teach or suggest canonical service description associated with the category, as discussed above. Therefore, it follows that *Poon* does not teach the further limitation of a canonical service description that includes information identifying minimum requirements of the category regarding one or more security requirements, privacy requirements, and communication protocol requirements.

A.10. Claims 8, 18, and 28 Distinguish Over the Cited Art

Claims 8, 18, and 28 depend from Claims 1, 11, and 21, respectively, and are each considered to patentably distinguish over the art for the same reasons given in support thereof. Additionally, Claims 8, 18, and 28 distinguish over the art in reciting the feature of searching the taxonomy for an alternate category in which the service description should be registered, and registering the service description in the alternate category. The *Poon* reference fails to show or suggest this feature.

A.11. Remaining Claims Distinguish Over Cited Art

Claims 4, 6 and 9-10 respectively depend from Claim 1, and are each considered to patentably distinguish over the art for at least the same reasons given in support thereof.

Claims 14, 16, and 19-20 respectively depend from Claim 11, and are each considered to patentably distinguish over the art for at least the same reasons given in support thereof.

Claims 24, 26, and 29-30 respectively depend from Claim 21, and are each considered to patentably distinguish over the art for at least the same reasons given in support thereof.

B. CONCLUSION

For at least all of the above reasons, Applicants respectfully submit that *Poon* neither discloses nor suggests all of the features of Claims 1-31.

Accordingly, Claims 1-31 patentably distinguish over the *Poon* reference, and it is respectfully requested that the Board reverse the Examiner's rejection of these claims under 35 U.S.C. § 102(e).

/James O. Skarsten/
James O. Skarsten
Reg. No. 28,346
YEE & ASSOCIATES, P.C.
PO Box 802333
Dallas, TX 75380
(972) 385-8777

CLAIMS APPENDIX

The text of the claims involved in the appeal are:

1. A method of registering services in a taxonomy, comprising:

receiving a registration request, the registration request including a service description and an identification of a category within the taxonomy in which the service is to be registered;

determining if the service description should be registered in the identified category based on a canonical service description associated with the category; and

registering the service description in the identified category if the determination is that the service description should be registered in the identified category.

2. The method of claim 1, wherein the canonical service description identifies minimum criteria for the category.

3. The method of claim 1, wherein registering the service description in the category includes storing the service description and an associated model description in a storage in association with the category.

4. The method of claim 1, wherein the method is implemented in a service broker within at least one network.

5. The method of claim 1, wherein if it is determined that the service description should not be registered in the category, a determination is made as to whether a request to add a new category is received.

6. The method of claim 5, wherein if a request to add a new category is received, a determination is made as to whether to add the new category, and wherein if the new category is added, the service description is registered in association with the new category.

7. The method of claim 1, wherein the canonical service description includes information identifying minimum requirements of the category regarding one or more of security requirements, privacy requirements and communication protocol requirements.

8. The method of claim 1, wherein if it is determined that the service description should not be registered in the category, the method further comprises:

searching the taxonomy for an alternate category in which the service description should be registered; and

registering the service description in the alternate category.

9. The method of claim 8, wherein searching the taxonomy for an alternate category includes searching one or more of sibling, parent and child categories of the identified category within a predetermined range of the identified category in the taxonomy.

10. The method of claim 8, wherein searching the taxonomy for an alternate category includes searching the taxonomy for a category in which the service description meets requirements of a canonical service description associated with the alternate category.

11. A computer program product in a computer readable medium for registering services in a taxonomy, comprising:

first instructions for receiving a registration request, the registration request including a service description and an identification of a category within the taxonomy in which the service is to be registered;

second instructions for determining if the service description should be registered in the identified category based on a canonical service description associated with the category; and

third instructions for registering the service description in the identified category if the determination is that the service description should be registered in the identified category.

12. The computer program product of claim 11, wherein the canonical service description identifies minimum criteria for the category.

13. The computer program product of claim 11, wherein the third instructions for registering the service description in the category includes instructions for storing the service description and an associated model description in a storage in association with the category.

14. The computer program product of claim 11, wherein the computer program product is executed in a service broker within at least one network.

15. The computer program product of claim 11, further comprising fourth instructions for determining whether a request to add a new category is received, if it is determined that the service description should not be registered in the category.

16. The computer program product of claim 15, further comprising fifth instructions for determining whether to add the new category, if a request to add a new category is received, and sixth instructions for registering the service description in association with the new category, if the new category is added.

17. The computer program product of claim 11, wherein the canonical service description includes information identifying minimum requirements of the category regarding one or more of security requirements, privacy requirements and communication protocol requirements.

18. The computer program product of claim 11, further comprising:

fourth instructions for searching the taxonomy for an alternate category in which the service description should be registered if the result of execution of the second instructions is that the service description should not be registered in the category; and

fifth instructions for registering the service description in the alternate category if an alternate category is identified by execution of the fourth instructions.

19. The computer program product of claim 18, wherein the fourth instructions for searching the taxonomy for an alternate category includes instructions for searching one or more of sibling, parent and child categories of the identified category within a predetermined range of the identified category in the taxonomy.

20. The computer program product of claim 18, wherein the fourth instructions for searching the taxonomy for an alternate category includes instructions for searching the taxonomy for a category in which the service description meets requirements of a canonical service description associated with the alternate category.

21. An apparatus for registering services in a taxonomy, comprising:

means for receiving a registration request, the registration request including a service description and an identification of a category within the taxonomy in which the service is to be registered;

means for determining if the service description should be registered in the identified category based on a canonical service description associated with the category; and

means for registering the service description in the identified category if the determination is that the service description should be registered in the identified category.

22. The apparatus of claim 21, wherein the canonical service description identifies minimum criteria for the category.

23. The apparatus of claim 21, wherein the means for registering the service description in the category includes means for storing the service description and an associated model description in a storage in association with the category.

24. The apparatus of claim 21, wherein the apparatus is part of a service broker within at least one network.

25. The apparatus of claim 21, further comprising means for determining whether a request to add a new category is received if it is determined that the service description should not be registered in the category.

26. The apparatus of claim 25, further comprising means for determining whether to add the new category, if a request to add a new category is received, and means for registering the service description in association with the new category, if the new category is added.

27. The apparatus of claim 21, wherein the canonical service description includes information identifying minimum requirements of the category regarding one or more of security requirements, privacy requirements and communication protocol requirements.

28. The apparatus of claim 21, further comprising:

means for searching the taxonomy for an alternate category in which the service description should be registered if the means for determining indicates that the service description should not be registered in the category; and

means for registering the service description in the alternate category if an alternate category is identified by the means for searching.

29. The apparatus of claim 28, wherein the means for searching the taxonomy for an alternate category includes means for searching one or more of sibling, parent and child categories of the identified category within a predetermined range of the identified category in the taxonomy.

30. The apparatus of claim 28, wherein the means for searching the taxonomy for an alternate category includes means for searching the taxonomy for a category in which the service description meets requirements of a canonical service description associated with the alternate category.

31. A method, in a service broker device within a computer network, of registering services in a taxonomy, comprising:

receiving a registration request at the service broker device, the registration request including a canonical service description and an identification of a category within the taxonomy in which the service is to be registered;

determining if the service description should be registered in the identified category based on a canonical service description associated with the category, wherein the canonical service description includes information identifying minimum requirements of the category regarding one or more of security requirements, privacy requirements, or communication protocol requirements;

if the determination is that the service description should be registered in the identified category, registering the service description in the identified category; and

if the determination is that the service description should not be registered in the identified category, searching the taxonomy for an alternate category in which the service description should be registered and registering the service description in the alternate category; and

storing the service description and an associated model description in a storage device in association with the registered category.

EVIDENCE APPENDIX

There is no evidence to be presented.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings.